


1. PRODUCT IDENTIFICATION

1.1	Product Name: IGORA ROYAL ABSOLUTES – COLOR CRÉME
1.2	Chemical Name: NA
1.3	Synonyms: NA
1.4	Trade Names: IGORA ROYAL ABSOLUTES – COLOR CRÉME 4-60 (MEDIUM BROWN CHOCOLATE NATURAL); 4-90 (MEDIUM BROWN VIOLET NATURAL); 5-50 (LIGHT BROWN GOLD NATURAL); 5-60 (LIGHT BROWN CHOCOLATE NATURAL); 5-80 (LIGHT BROWN RED NATURAL); 6-60 (DARK BLONDE CHOCOLATE NATURAL); 6-70 (DARK BROWN COPPER NATURAL); 6-80 (DARK BROWN RED NATURAL); 7-50 (MEDIUM BLONDE GOLD NATURAL); 7-60 (MEDIUM BLONDE CHOCOLATE NATURAL); 7-70 (MEDIUM BLONDE COPPER NATURAL); 8-50 (LIGHT BLONDE GOLD NATURAL); 9-40 (EXTRA LIGHT BLONDE BEIGE NATURAL); 9-50 (EXTRA LIGHT BLONDE GOLD NATURAL); 9-60 (EXTRA LIGHT BLONDE CHOCOLATE NATURAL)
1.5	Product Use: PROFESSIONAL OR SUNDRY USE ONLY
1.6	Distributor's Name: SCHWARZKOPF, INC.
1.7	Distributor's Address: 600 CORPORATE POINTE, SUITE 1100, CULVER CITY, CA 90230 USA
1.8	Emergency Phone: CHEMTREC: +1 (703) 527-3887 / +1 (800) 424-3887
1.9	Business Phone: +1 (310) 641-4600 / +1(800) 707-9997

2. HAZARD IDENTIFICATION

2.1	<p>Hazard Identification:</p> <p>This product is NOT classified as a HAZARDOUS SUBSTANCE or as DANGEROUS GOODS according to the classification criteria of NOHSC: 1088 (2004) and ADG Code (Australia). KEEP OUT OF REACH OF CHILDREN. Avoid getting into the eyes. Use only as directed.</p> <p>WARNING! CAUSES SKIN IRRITATION. CAUSES SERIOUS EYE IRRITATION. MAY CAUSE RESPIRATORY IRRITATION.</p> <p>Hazard Statements (H): H315-Causes skin irritation. H319-Causes serious eye irritation. H335-May cause respiratory irritation.</p> <p>Precautionary Statements (P): P261-Avoid breathing dust/fume/gas/mist/vapors/spray. P264-Wash skin thoroughly after handling. P270-Do not eat, drink or smoke when using this product. P281-Use personal protective equipment as required. P302 + P352-IF ON SKIN: Wash with plenty of soap and water. P305 + P351 + P338-IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P332 + P313-If skin irritation occurs: Get medical advice/attention. P337 + P313-If eye irritation persists: Get medical advice/attention. P403 + P233-Store in a well-ventilated place. Keep container tightly closed.</p>							
2.2	<table border="0"> <tr> <td>Routes of Entry:</td> <td>Inhalation:</td> <td>NO</td> <td>Absorption:</td> <td>YES</td> <td>Ingestion:</td> <td>YES</td> </tr> </table>	Routes of Entry:		Inhalation:	NO	Absorption:	YES	Ingestion:
Routes of Entry:	Inhalation:	NO	Absorption:	YES	Ingestion:	YES		
2.3	<p>Effects of Exposure:</p> <p>INGESTION: If product is swallowed may cause nausea, vomiting and/or diarrhea.</p> <p>EYES: Moderately irritating to the eyes. Symptoms of overexposure may include redness, itching, stinging, irritation and watering.</p> <p>SKIN: May be irritating to skin. The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) or sensitization in some sensitive individuals.</p> <p>INHALATION: May cause mild, transient respiratory irritation. Avoid prolonged contact with concentrated vapors or mists.</p>							
2.4	<p>Symptoms of Overexposure:</p> <p>Overexposure in eyes may cause redness, stinging, itching and watering. Symptoms of skin overexposure may include redness, itching, and irritation of affected areas. The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) or sensitization in some sensitive individuals.</p>							
2.5	<p>Acute Health Effects:</p> <p>Moderate irritation to eyes. Symptoms of overexposure may include redness, itching, stinging, irritation and watering. Moderate irritation to skin near affected areas.</p>							
2.6	<p>Chronic Health Effects:</p> <p>No harmful or chronic health effects are expected to occur from a single accidental ingestion. Propylene glycol, contained in very small quantities in this product may be mild allergens to some sensitive individuals.</p>							
2.7	<p>Target Organs:</p> <p>Eyes</p>							

3. COMPOSITION & INGREDIENT INFORMATION

CHEMICAL NAME(S)	CAS No.	RTECS No.	EINECS No.	%	EXPOSURE LIMITS IN AIR (mg/m ³)								OTHER
					ACGIH		NOHSC			OSHA			
					ppm		ppm			ppm			
TLV	STEL	ES-TWA	ES-STEL	ES-PEAK	TLV	STEL	IDLH						
WATER (AQUA/EAU)	7732-18-5	ZC0110000	231-791-2	NA	NA	NA	NF	NF	NF	NA	NA	NA	
CETEARYL ALCOHOL	36653-82-4	MM0225000	253-149-0	NA	NA	NA	NF	NF	NF	NA	NA	NA	
AMMONIUM HYDROXIDE	1336-21-6	BQ9625000	215-647-6	NA	25	35	25	50	NF	25	NA	NA	25 NIOSH
GLYCERYL STEARATE	123-94-4	NA	204-664-4	NA	NA	NA	NF	NF	NF	NA	NA	NA	
CETEARETH-20	68439-49-6	NA	500-212-8	NA	NA	NA	NF	NF	NF	NA	NA	NA	
TOLUENE-2,5-DIAMINE SULFATE	615-50-9	NA	210-431-8	NA	NA	NA	NF	NF	NF	NA	NA	NA	
OCTYLDODECANOL	5333-42-6	NA	226-242-9	NA	NA	NA	NF	NF	NF	NA	NA	NA	
SODIUM LAURETH SULFATE	9004-82-4	WB7499000	221-416-0	NA	NA	NA	NF	NF	NF	NA	NA	NA	
MORINGA PTERYGOSPERMA SEED EXTRACT	93165-54-9	NA	296-941-1	NA	NA	NA	NF	NF	NF	NA	NA	NA	
BIOTIN	58-85-5	NA	200-399-3	NA	NA	NA	NF	NF	NF	NA	NA	NA	
RESORCINOL	108-46-3	VG9625000	203-585-2	NA	NA	NA	NF	NF	NF	NA	NA	NA	
ETHANOLAMINE	141-43-5	KJ5775000	205-483-3	NA	3	6	3	NF	NF	3	6	30	
SODIUM CETEARYL SULFATE	7757-82-6	WE1650000	231-820-9	NA	NA	NA	NF	NF	NF	NA	NA	NA	
GLYCERIN	56-81-5	MA8050000	200-289-5	NA	NA	NA	NF	NF	NF	NA	NA	NA	
OLEIC ACID	112-80-1	RG2275000	204-007-1	NA	NA	NA	NF	NF	NF	NA	NA	NA	
PARFUM (FRAGRANCE)	NA	NA	NA	NA	NA	NA	NF	NF	NF	NA	NA	NA	
POTASSIUM STEARATE	593-29-3	WI4600000	209-786-1	NA	(10)	NA	NF	NF	NF	NA	NA	NA	
TETRASODIUM EDTA	10378-23-1	NA	NA	NA	NA	NA	NF	NF	NF	NA	NA	NA	
CARBOMER	50-81-7	CI7650000	200-066-2	NA	NA	NA	NF	NF	NF	NA	NA	NA	
POLYQUATERNIUM-39	25136-75-8	NA	NA	NA	NA	NA	NF	NF	NF	NA	NA	NA	
POTASSIUM HYDROXIDE	1310-58-3	TT2100000	215-181-3	NA	(2)	NA	(2)	NF	NF	(2)	NA	NA	(2) NIOSH
ASCORBIC ACID	50-81-7	CI7650000	200-066-2	NA	NA	NA	NF	NF	NF	NA	NA	NA	
LINOLEAMIDOPROPYL PG-DIMONIUM CHLORIDE PHOSPHATE	83682-78-4	NA	280-518-3	NA	NA	NA	NF	NF	NF	NA	NA	NA	
SODIUM SULFATE	7757-82-6	WE1650000	231-820-9	NA	NA	NA	NF	NF	NF	NA	NA	NA	
LINALOOL	78-70-6	RG5775000	201-134-4	NA	NA	NA	NF	NF	NF	NA	NA	NA	ALLERGEN
BENZOIC ACID	65-85-0	DG0875000	200-618-2	NA	NA	NA	NF	NF	NF	NA	NA	NA	
CITRIC ACID	77-92-9	GE7350000	201-069-1	NA	NA	NA	NF	NF	NF	NA	NA	NA	
CI 77891 (TITANIUM DIOXIDE)	98084-96-9	NA	236-675-5	NA	NA	NA	NF	NF	NF	NA	NA	NA	
MAY ALSO CONTAIN:													
m-AMINOPHENOL	591-27-5	NA	209-711-2	NA	NA	NA	NF	NF	NF	NA	NA	NA	
2-METHYLRESORCINOL	608-25-3	VH2009500	210-155-8	NA	NA	NA	NF	NF	NF	NA	NA	NA	
2-AMINO-3-HYDROXYPYRIDINE	16867-03-1	NA	240-886-8	NA	NA	NA	NF	NF	NF	NA	NA	NA	
2-AMINO-4-HYDROXYETHYLAMINOANISOLE SULFATE	83763-48-8	NA	280-734-8	NA	NA	NA	NF	NF	NF	NA	NA	NA	
2-AMINO-6-CHLORO-4-NITROPHENOL	6358-09-4	NA	228-762-1	NA	NA	NA	NF	NF	NF	NA	NA	NA	
2,7-NAPHTHALENIOL	582-17-2	NA	209-478-7	NA	NA	NA	NF	NF	NF	NA	NA	NA	
4-AMINO-2-HYDROXYTOLUENE	2835-95-2	NA	220-618-6	NA	NA	NA	NF	NF	NF	NA	NA	NA	
4-AMINO-m-CRESOL	2835-99-6	NA	220-621-2	NA	NA	NA	NF	NF	NF	NA	NA	NA	

4. FIRST AID MEASURES

4.1	<p>First Aid:</p> <p>INGESTION: DO NOT INDUCE VOMITING. Contact ChemTrec at +1 (703) 527-3887 or the nearest Poison Control Center or local emergency telephone number for assistance and instructions. Seek immediate medical attention. If vomiting occurs spontaneously, keep victim's head lowered (forward) to reduce the risk of aspiration.</p> <p>EYES: If product gets in the eyes, flush eyes thoroughly with copious amounts of water for at least 15 minutes, holding eyelid(s) open to ensure complete flushing. If the eyes or face becomes swollen during or following use, consult a physician or emergency room immediately.</p> <p>SKIN: Remove contaminated clothing and wash affected areas with soap and water. If discomfort persists and/or the skin reaction worsens, contact a physician immediately. In cases where discomfort persists and/or medical attention is sought, do not use hair color products again until the specific nature of the skin reaction and the causative agent has been identified by a dermatologist, and appropriate medical advice provided. Do not wear contaminated clothing until after it has been properly cleaned.</p> <p>INHALATION: Remove victim to fresh air at once. Under extreme conditions, if breathing stops, perform artificial respiration. Seek immediate medical attention.</p>
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4.2	<p>Medical Conditions Aggravated by Exposure:</p> <p>Pre-existing dermatitis, other skin conditions, and disorders of the target organs (eyes, skin, and respiratory system) or impaired kidney function may be more susceptible to the effects of this substance.</p>	HEALTH		1
		FLAMMABILITY		0
		PHYSICAL HAZARDS		1
		PROTECTIVE EQUIPMENT		B
		EYES	SKIN	

5. FIREFIGHTING MEASURES

5.1	Flashpoint & Method: This product is not flammable.
5.2	Autoignition Temperature: NA
5.3	Flammability Limits: Lower Explosive Limit (LEL): NA Upper Explosive Limit (UEL): NA
5.4	Fire & Explosion Hazards: NA
5.5	Extinguishing Methods: Water Fog, Foam, Dry Chemical, CO₂
5.6	<p>Firefighting Procedures:</p> <p>Fight fires as for surrounding materials. Hazardous decomposition products may be released. Thermal degradation may produce oxides of carbon and/or nitrogen, hydrocarbons and/or derivatives. Firefighters should wear a MSHA/NIOSH approved or equivalent self-contained breathing apparatus (SCBA) and protective clothing. Fire should be fought from a safe distance. Keep containers cool until well after the fire is out. Use water spray to cool fire-exposed surfaces and to protect personal. Fight fire upwind. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply, or any natural waterway.</p>



6. ACCIDENTAL RELEASE MEASURES

6.1	<p>Spills:</p> <p>Before cleaning any spill or leak, individuals involved in spill cleanup must wear appropriate Personal Protective Equipment (PPE). Use safety glasses or safety goggles if splash hazards exist; use gloves and other protective clothing (apron, boots, etc.) to prevent skin contact.</p> <p>Small Spills: Wear appropriate protective equipment including gloves and protective eyewear. Use a non-combustible material such as vermiculite or sand to soak up the product and place into a container for later disposal.</p> <p>Large Spills: Keep incompatible materials (e.g., organics such as oil) away from spill. Stay upwind and away from spill or release. Isolate immediate hazard area and keep unauthorized personnel out of area. Stop spill or release if it can be done with minimal risk. Wear appropriate protective equipment including respiratory protection as conditions warrant.</p>
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7. HANDLING & STORAGE INFORMATION

7.1	Work & Hygiene Practices: Do not eat, drink or smoke when handling this product. Wash thoroughly after handling. Avoid contact with eyes, skin, and clothing. Do not expose to heat and flame. Use only in ventilated areas. Keep out of the reach of children. Wash unintentional residues with soap and warm water.
7.2	Storage & Handling: Use and store in a cool, dry, well-ventilated location (e.g., local exhaust ventilation, fans) away from heat and direct sunlight. Avoid temperatures above 120°F. Keep away from incompatible substances. Protect containers from physical damage. To avoid unintentional spraying keep cap in place when not in use. Keep away from children at all times
7.3	Special Precautions: Spilled material may present a slipping hazard if left unattended. Clean all spills promptly.

8. EXPOSURE CONTROLS & PERSONAL PROTECTION

8.1	Ventilation & Engineering Controls: General mechanical (e.g., fans) or natural ventilation is sufficient when this product is in use. Use local or general exhaust ventilation to effectively remove and prevent buildup of vapors or mist generated from the handling of this product. Ensure appropriate decontamination equipment is available (e.g., sink, safety shower, eye-wash station).
8.2	Respiratory Protection: No special respiratory protection is required under typical circumstances of use or handling. In instances where vapors or sprays of this product are generated, and respiratory protection is needed, use only protection authorized by 29 CFR §1910.134, applicable U.S. State regulations, or the Canadian CAS Standard Z94.4-93 and applicable standards of Canadian Provinces, EC member States, or Australia.
8.3	Eye Protection: Avoid eye contact. Safety glasses with side shields should be used when handling large quantities (e.g., ≥ 1 gallon) of this product.
8.4	Hand Protection: None required under normal conditions of use. However, may cause skin irritation in some sensitive individuals. When handling large quantities (e.g., ≥ 1 gallon), wear rubber or impervious plastic gloves.
8.5	Body Protection: No apron required when handling small quantities. When handling large quantities (e.g., ≥ 1 gallon), eye wash stations and deluge showers should be available. Upon completion of work activities involving large quantities of this product, wash any exposed areas thoroughly with soap and water.

9. PHYSICAL & CHEMICAL PROPERTIES

9.1	Density:	0.99 ± 0.02
9.2	Boiling Point:	> 100 °C (> 212 °F)
9.3	Melting Point:	NA
9.4	Evaporation Rate:	NA
9.5	Vapor Pressure:	ND
9.6	Molecular Weight:	NA
9.7	Appearance & Color:	Cream with perfumery or ammoniacal odor. Various colors (see section 1.4).
9.8	Odor Threshold:	ND
9.9	Solubility:	Slightly soluble in water
9.10	pH	9.5-10.8
9.11	Viscosity:	NA
9.12	Other Information:	Complies with Federal and State regulations for VOC content.

10. STABILITY & REACTIVITY

10.1	Stability: Stable under normal conditions; unstable with heat or contamination.
10.2	Hazardous Decomposition Products: Oxides of carbon (CO, CO₂), nitrogen (NO_x) and sulfur (SO₂).
10.3	Hazardous Polymerization: Will not occur.
10.4	Conditions to Avoid: Open flames, sparks, high heat, incompatible substances and direct sunlight.
10.5	Incompatible Substances: Avoid extreme heat and ignition sources. Store away from oxidizers.

11. TOXICOLOGICAL INFORMATION

11.1	Toxicity Data: The product has not been tested for specific toxicity data.
11.2	Acute Toxicity: See section 2.5
11.3	Chronic Toxicity: See section 2.6
11.4	Suspected Carcinogen: The following ingredient are listed on IARC 3 - Group 3 (Not classifiable as to its carcinogenicity to humans): Resorcinol
11.5	Reproductive Toxicity: This product is not reported to produce reproductive toxicity in humans.
	Mutagenicity: This product is not reported to produce mutagenic effects in humans.
	Embryotoxicity: This product is not reported to produce embryotoxic effects in humans.
	Teratogenicity: This product is not reported to produce teratogenic effects in humans.
	Reproductive Toxicity: This product is not reported to produce reproductive effects in humans.
11.6	Irritancy of Product: See Section 2.3
11.7	Biological Exposure Indices: NE
11.8	Physician Recommendations: Treat symptomatically.

12. ECOLOGICAL INFORMATION

12.1	Environmental Stability: There is no specific data available for this product.
12.2	Effects on Plants & Animals: There is no specific data available for this product.
12.3	Effects on Aquatic Life: There is no specific data available for this product.

13. DISPOSAL CONSIDERATIONS




13.1	Waste Disposal: Products covered by this MSDS, in their original form, when disposed as waste, are considered non hazardous waste according to Federal RCRA regulations (40 CFR 261). Disposal should be in accordance with local, state and federal regulations. Dispose of in accordance with federal, state and local regulations.
13.2	Special Considerations: California Waste Code: 331

14. TRANSPORTATION INFORMATION







The basic description (ID Number, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation. Additional descriptive information may be required by 49 CFR, IATA/ICAO, IMDG and the CTDGR.

14.1	49 CFR (GND): NOT REGULATED	
14.2	IATA (AIR): NOT REGULATED	
14.3	IMDG (OCN): NOT REGULATED	
14.4	TDGR (Canadian GND): NOT REGULATED	
14.5	ADR/RID (EU): NOT REGULATED	
14.6	SCT (MEXICO): NOT REGULATED	
14.7	ADGR (AUS): NOT REGULATED	

15. REGULATORY INFORMATION

15.1	SARA Reporting Requirements: Ammonium Hydroxide (as ammonia) is subject to the reporting requirements of SARA Title III, Sections 312/313.	
15.2	SARA Threshold Planning Quantity: This product is not subject to the reporting requirements of SARA Title III, Section 302.	
15.3	TSCA Inventory Status: All chemical substances of this product are listed on the TSCA inventory or are otherwise exempted from inventory status.	
15.4	CERCLA Reportable Quantity (RQ): Ammonium Hydroxide (Ammonia): 1000 lbs (454 kg); Potassium Hydroxide: 1000 lbs (454 kg)	
15.5	Other Federal Requirements: This product complies with the appropriate sections of the Food and Drug Administration's 21 CFR subchapter G (Cosmetics).	
15.6	Other Canadian Regulations: This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR. The components of this product are listed on the DSL/NDSL. None of the components of this product are listed on the Priorities Substances List.	
15.7	State Regulatory Information: Ammonium Hydroxide (as ammonia) can be found on the following state criteria lists: Illinois Hazardous Substances List (IL); Massachusetts Hazardous Substances List (MA); New Jersey Right-to-Know List (NJ); Pennsylvania Right-to-Know List (PA); Rhode Island Hazardous Substances List (RI). Potassium Hydroxide is listed on the following state criteria lists: Florida Toxic Substances List (FL); MA; Minnesota Hazardous Substances List (MN); NJ; PA; Washington Permissible Exposures List (WA). Oleic Acid is listed on the following state criteria list(s): Pennsylvania Right-to-Know List (PA). Ethanolamine is found on the following state criteria lists: Florida Toxic Substances List (FL); MA; Minnesota Hazardous Substances List (MN); PA; Washington Permissible Exposures List (WA). Resorcinol is found on the following state criteria lists: FL; MA; MN; PA; WA; Wisconsin Hazardous Substances List (WI). No components of this product are listed on the California Proposition 65 lists.	
15.8	67/548/EEC (European Union) and other Requirements: The primary component of this product is listed in Annex I of EU Directive 67/548/EEC: Ammonium Hydroxide: Harmful (Xi). Risk Phrases (R): 22-41-43 Harmful if swallowed. Risk of serious damage to eyes. May cause sensitization by skin contact. Safety Phrases (S): 2-3/7-20-26-37/39 - Keep away from children. Keep container tightly closed in a cool place. When using do not eat or drink. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable gloves and eye/face protection. WARNING! CAUSES SKIN IRRITATION. CAUSES SERIOUS EYE IRRITATION. MAY CAUSE RESPIRATORY IRRITATION. Hazard Statements (H): H315-Causes skin irritation. H319-Causes serious eye irritation. H335-May cause respiratory irritation. Precautionary Statements (P): P261-Avoid breathing dust/fume/gas/mist/vapors/spray. P264-Wash skin thoroughly after handling. P270-Do not eat, drink or smoke when using this product. P281-Use personal protective equipment as required. P302 + P352-IF ON SKIN: Wash with plenty of soap and water. P305 + P351 + P338-IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P332 + P313-If skin irritation occurs: Get medical advice/attention. P337 + P313-If eye irritation persists: Get medical advice/attention. P403 + P233-Store in a well-ventilated place. Keep container tightly closed. HazChem Code: None allocated Poison Schedule: None allocated	 

16. OTHER INFORMATION

16.1	<p>Other Information: For external use only. Use only as directed. Discontinue use immediately if irritation develops.</p>		
16.2	<p>Terms & Definitions: Please see last page of this MSDS.</p>		
16.3	<p>Disclaimer: This Material Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR §1910.1200. Other government regulations must be reviewed for applicability to this product. To the best of ShipMate's & Schwarzkopf's knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are not guaranteed and no warranties of any type, either expressed or implied, are provided. The information contained herein relates only to the specific product(s). If this product(s) is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.</p>		
16.4	<table border="0" style="width: 100%;"> <tr> <td style="width: 30%; vertical-align: top;"> <p>Prepared for: Schwarzkopf, Inc. 600 Corporate Pointe, Suite 1100 Culver City, CA 90230 USA Tel: +1 (310) 641-4600 Fax: +1 (310) 641-4601 http://www.schwarzkopf.com</p> </td> <td style="width: 70%; text-align: center; vertical-align: middle;">  </td> </tr> </table>	<p>Prepared for: Schwarzkopf, Inc. 600 Corporate Pointe, Suite 1100 Culver City, CA 90230 USA Tel: +1 (310) 641-4600 Fax: +1 (310) 641-4601 http://www.schwarzkopf.com</p>	
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16.5	<table border="0" style="width: 100%;"> <tr> <td style="width: 30%; vertical-align: top;"> <p>Prepared by: ShipMate, Inc. P.O. Box 787 Sisters, OR. 97759-0787 Tel: +1 (310) 370-3600 Fax: +1 (310) 370-5700 http://www.shipmate.com</p> </td> <td style="width: 70%; text-align: center; vertical-align: middle;">  </td> </tr> </table>	<p>Prepared by: ShipMate, Inc. P.O. Box 787 Sisters, OR. 97759-0787 Tel: +1 (310) 370-3600 Fax: +1 (310) 370-5700 http://www.shipmate.com</p>	
<p>Prepared by: ShipMate, Inc. P.O. Box 787 Sisters, OR. 97759-0787 Tel: +1 (310) 370-3600 Fax: +1 (310) 370-5700 http://www.shipmate.com</p>			

DEFINITION OF TERMS

A large number of abbreviations and acronyms appear on a MSDS. Some of these that are commonly used include the following:

GENERAL INFORMATION:

CAS No.	Chemical Abstract Service Number
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EXPOSURE LIMITS IN AIR:

ACGIH	American Conference on Governmental Industrial Hygienists
TLV	Threshold Limit Value
OSHA	U.S. Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
IDLH	Immediately Dangerous to Life and Health

FIRST AID MEASURES:

CPR	Cardiopulmonary resuscitation - method in which a person whose heart has stopped receives manual chest compressions and breathing to circulate blood and provide oxygen to the body.
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



HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: HMIS



















HEALTH, FLAMMABILITY & REACTIVITY RATINGS:













0	Minimal Hazard
1	Slight Hazard
2	Moderate Hazard
3	Severe Hazard
4	Extreme Hazard

HEALTH
FLAMMABILITY
PHYSICAL HAZARDS
PERSONAL PROTECTION

PERSONAL PROTECTION RATINGS:

A	
B	 
C	  
D	  
E	  
F	   

G	  
H	   
I	  
J	   
K	   
X	Consult your supervisor or SOPs for special handling directions.

 Safety Glasses	 Splash Goggles	 Face Shield & Eye Protection	 Gloves
 Boots	 Synthetic Apron	 Full Suit	 Dust Respirator
 Full Face Respirator	 Dust & Vapor Half-Mask Respirator	 Full Face Respirator	 Airline Hood/Mask or SCBA

Note: the dotted circle indicates that this respiratory protective equipment is required for high concentrations or for large volume spills or releases of product.

OTHER STANDARD ABBREVIATIONS:

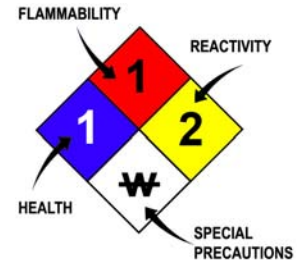
NA	Not Available
NR	No Results
NE	Not Established
ND	Not Determined
ML	Maximum Limit
SCBA	Self-Contained Breathing Apparatus

NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

FLAMMABILITY LIMITS IN AIR:	
Autoignition Temperature	Minimum temperature required to initiate combustion in air with no other source of ignition
LEL	Lower Explosive Limit - lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source
UEL	Upper Explosive Limit - highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source

HAZARD RATINGS:

0	Minimal Hazard
1	Slight Hazard
2	Moderate Hazard
3	Severe Hazard
4	Extreme Hazard
ACD	Acidic
ALK	Alkaline
COR	Corrosive
W	Use No Water
OX	Oxidizer
TREFOIL	Radioactive











TOXICOLOGICAL INFORMATION:

LD ₅₀	Lethal Dose (solids & liquids) which kills 50% of the exposed animals
LC ₅₀	Lethal concentration (gases) which kills 50% of the exposed animal
ppm	Concentration expressed in parts of material per million parts
TD ₀₁	Lowest dose to cause a symptom
TCLo	Lowest concentration to cause a symptom
TD ₀₁ , LD ₀₁ , & LD ₀₂ or TC, TC ₀₁ , LC ₀₁ , & LC ₀₂	Lowest dose (or concentration) to cause lethal or toxic effects
IARC	International Agency for Research on Cancer
NTP	National Toxicology Program
RTECS	Registry of Toxic Effects of Chemical Substances
BCF	Bioconcentration Factor
TLm	Median threshold limit
log K _{ow} or log K _{oc}	Coefficient of Oil/Water Distribution









REGULATORY INFORMATION:

WHMIS	Canadian Workplace Hazardous Material Information System
DOT	U.S. Department of Transportation
TC	Transport Canada
EPA	U.S. Environmental Protection Agency
DSL	Canadian Domestic Substance List
NDSL	Canadian Non-Domestic Substance List
PSL	Canadian Priority Substances List
TSCA	U.S. Toxic Substance Control Act
EU	European Union (European Union Directive 67/548/EEC)
WGK	Wassergefährdungsklassen (German Water Hazard Class)










WORKPLACE HAZARDOUS MATERIALS IDENTIFICATION (WHMIS) SYSTEM:

							
A	B	C	D1	D2	D3	E	F
Compressed	Flammable	Oxidizing	Toxic	Irritation	Infectious	Corrosive	Reactive

EC (67/548/EEC) INFORMATION:

							
C	E	F	N	O	T+	Xi	Xn
Corrosive	Explosive	Flammable	Harmful	Oxidizing	Toxic	Irritant	Harmful

CLP/GHS (1272/2008/EC) PICTOGRAMS:

								
GH501	GH502	GH503	GH504	GH505	GH506	GH507	GH508	GH509
Explosive	Flammable	Oxidizer	Pressurized	Corrosive	Toxic	Harmful Irritating	Health Hazard	Environment